



Title: TTA Tools Charter	Authors: Treacy, Kern, Ball	Date: 3/20/2020
Document No: 688-TTAT-001-MGMT		Version: 1.2

Telescope Time Allocation Tools

Charter

Project: 688

PREPARED BY	ORGANIZATION
Bob Treacy, Jeff Kern, Lewis Ball	NRAO

APPROVALS	ORGANIZATION	SIGNATURE
Jeff Kern	NRAO SRDP, Project Director	See SharePoint for approval workflow on Version 1.1, completed on 5/21/2019
Lewis Ball, Sponsor	NRAO SSR AD	
Brian Glendenning	NRAO, DMS AD	
Mark McKinnon	NRAO, NM Ops AD	
Walter Brisken	NRAO, VLBA Development D-AD	
Karen O'Neil	GBO, Director	

CHANGE RECORD

VERSION	DATE	SECTIONS	CHANGE DESCRIPTION
0.1	3/4/2019		Initial Draft
0.2	3/21/2019		Sponsor, director, manager edits
0.3	3/22/2019		Final version for circulation
1.0	4/2/2019	All	Incorporated comments from stakeholders.
1.1	5/17/2019	2,3	Added explicit support for ngVLA
1.2	3/20/2020	Title Page	Changed doc. No.& filename TTAT scheme



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I OVERVIEW

2 SCOPE AND PURPOSE

NRAO develops and supports a suite of Telescope Time Allocation (TTA) tools for several instruments, as described in the project scope under Section 3.2. The current tool suite does not support Science Ready Data Product (SRDP) Project objectives and the Proposal Submission Tool (PST) is the subject of some long-standing community concerns, as represented by the NRAO User Committee. Furthermore, the software is obsolete and increasingly difficult to maintain. The TTA tools will soon undergo a major redesign and reimplementation to address those user community concerns, while also assuring compliance with SRDP requirements. The management processes and deliverables needed for this effort closely align with the SRDP project structure. Therefore, it seems judicious to have SRDP include the TTA Tools in the project scope. This project is scoped to deliver a new proposal submission tool and tools to support the review and Time Allocation process, both for AUI's existing North American telescopes and for the proposed next generation VLA. Interfaces between these tools and existing tools for Observing Preparation (such as the OPT and SCHED) will be refined through this project and a concept for their successors proposed.

Approval of this document constitutes authorization to proceed with execution of all stated objectives. A more detailed project plan shall be developed following approval of the Project Charter, and will be reviewed at a Conceptual Design Review before implementation begins.

3 PROJECT DESCRIPTION

3.1 Authorization and Management

The following persons are authorized to execute the stated objectives:

- ❖ Project Director (PD): Jeff Kern
- ❖ Project Manager (PM): Robert Treacy
- ❖ Program Manager: Michael Shannon
- ❖ Project Sponsor: Lewis Ball
- ❖ Project Scientist: Dana Balsler

Project Management and System Engineering strategies will follow an appropriately scaled profile of the PMD SOPs as jointly determined between the PD and PM, along with accepted best practices and processes established within contributing departments.

Project decisions rest with the Project Director. Decisions needing further authority shall be taken first to the Project Sponsor and coordinated with the Program Manager if further escalation is warranted. Delegation of authority within the project will be described in the project management plan. Decisions with impact to the approved baseline (scope, budget, and schedule) or other impact **outside** the project, are subject to review by the NRAO and/or GBO Change Control Boards as appropriate for the impacts of the decision.



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3.2 Applicable [AD] and Reference Documents [RD]

[AD01] 530-SRDP-040-TTAT Telescope Time Allocation Software Requirements: Proposal Submission and Review

[RD01] 530-SRDP-003-MGMT SRDP Project Management Plan

[RD02] 530-SRDP-010-MGMT SRDP Systems Engineering Management Plan

3.3 Scope of the Project

The New Telescope Time Allocation Tools project encompasses the definition, design, development, and deployment a new suite of tools for the proposal and time allocation process for NRAO operated telescopes (VLA, VLBA, HSA, GMVA). This tool will also be used to support the proposed next generation VLA. The Green Bank Observatory has elected to partner with NRAO in the development and deployment of tools to support the proposal and review process so that GBT continues to be supported. GBO is not part of the SRDP project, so components of the system required only for SRDP operations are not included in the GBO scope. At conclusion, the proposal and review tools will be a fully integrated part of Observatory Science Operations, including the generation of Science Ready Data Products. Managed as a sub-project of the Observatory SRDP project, the TTA Refurbishment project is charged with delivering the necessary improvements for SRDP as well as addressing long standing community concerns about the tool.

This project will start from the high-level requirements developed by an NRAO/LBO/GBO working group as described in the applicable document [AD01] “*Telescope Time Allocation (TTA) Software Requirements: Proposal Submission and Review*” by Dana Balsler et al. This requirements document captures the concepts needed to establish the expanded scope for the SRDP project. The Project Plan [RD01] the Systems Engineering Plan [RD02] and their associated subsidiary documents will be updated to accommodate the increase to SRDP project scope.

Ultimate success is measured by the utility of the new tool suite, the community response to the tools, and the operational efficiencies within the Observatories (including the SRDP project) provided by improved capture of observing intent. Programmatic success is measured by the degree to which the enumerated goals and objectives have been met, and how closely the project follows and completes within the approved baseline.

3.4 Deliverables

- Reports to Directors Offices and other entities as part of the SRDP project as defined under the SRDP project communications plan
- Project documentation as defined in the TTA Tool Refurbishment Project Plan, Schedule, Budget, issue logs, etc.
- An updated Proposal and Review Plan, including staff size and duties by job category and operational procedures.
- Software tools to support the creation, review, and dispensation of observing proposals from the community.
- A concept for managing interfaces to observation preparation tools (such as the OPT, DSS, and SCHED) is an early deliverable from the project.
- User Documentation, including a user’s guide.



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3.5 Stakeholders

A complete stakeholder registry will be defined as part of the project initiation phase. A partial list of stakeholders will include:

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|--------------------------------------|-------------------------------------|
| AUI Corporate | NRAO Data Analysts |
| NSF NRAO Program Manager | GBO Director |
| NRAO Director's Office | GBO GBT Science Division Head |
| NRAO NM Ops AD | GBO Software Division |
| NRAO SSR AD | GBO Program Management |
| NRAO DMS AD | Radio Astronomer User Community |
| NRAO Software Division Head | Non-Radio Astronomer User Community |
| NRAO DMS SSA Group | ngVLA Project |
| NRAO Scientific Information Services | NRAO / GBO TTA Team |
| NRAO PMD AD | Sponsored Observers |
| NRAO Telescope Operations | |

3.6 Budget

The development of the New TTA Tools will be internally funded by the NRAO and GBO Observatories. Project oversight and management will be provided by the SRDP Project Office. Effort for the Project Scientist role will be allocated from existing SSR staff. Supporting scientific effort will be made available from the Science Operations staff of the supported telescopes. Development and software design effort will be allocated from the NRAO DMS division and GBO Software division. No significant capital costs are anticipated; routine capital costs associated with maintenance and renewal of computing resources will be addressed as part of the overall NRAO hardware management plan. Travel support will be required to facilitate communication between the contributing partners.

3.7 System Specification Schedule and Milestones

A preliminary set of milestones during the project initiation phase is given below. A more detailed schedule will be developed as part of the project initiation phase.

- 2019 February: new TTA Tool Project Established
- 2019 April: Internal (NRAO, GBO) discussion of Concept
- 2019 June: NRAO Users Committee Meeting
- 2019 October: Conceptual Design Review (End Project Initiation)

3.8 Risk

Risk will be tracked and detailed in the SRDP project Risk Register. A summary of top-level risks is listed below.

- Resource Risk – The project does not have direct oversight of critical project resources, careful planning and communication with line management of other NRAO and GBO divisions is therefore essential.
- Acceptance Risk – A stated objective of this project is to make the PST more “ALMA like” in function (for users). The ALMA-OT may simultaneously be undergoing a refresh cycle, making this a moving target. Opportunities to collaborate and engage with ALMA will be pursued, to mitigate this risk to explore



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options for reuse.

- Perceived Scope – The NRAO Users Committee has repeatedly provided guidance that replacing the existing PST is a high priority. Based upon the UC’s reaction to previous timescales, it appears that that there is a misunderstanding about the scope of this effort.
- Many of the technologies that will be used in this project are rapidly changing, care must be taken to ensure choices are likely to be maintained and are modular enough to be replaced if necessary.
- There is a risk of priority conflict particularly for the SSA and GBO software development teams.